

2024

DAILY CURRENT AFFAIRS





Daily Current Affairs from *The Hindu*, *The Indian Express* & *The Assam Tribune*

21st Nov 2024

CONTENT LIST

GS 1: ART & CULTURE, HISTORY, INDIAN SOCIETY AND GEOGRAPHY

	Topics	Syllabus	Page No:
1	Story, history of exposition of sacred relics of St. Francis Xavier	Art & culture (IE)	19

GS 2: POLITY, GOVERNANCE, SOCIAL JUSTICE, INTERNATIONAL RELATIONS/INSTITUTIONS

	Topics	Syllabus	Page No:
2	What is Russia's nuclear doctrine? Updated by Putin	International relations (IE)	19
3	Should package food content be labelled?	Governance (TH)	10
4	Telcos can claim CENVAT credit for towers, shelters	Polity (TH)	12

GS 3: ECONOMY, ECOLOGY, SCIENCE & TECHNOLOGY, DEFENCE, SECURITY AND DISASTER MANAGEMENT

	Topics	Syllabus	Page No:
5	GM crops can help fight hunger depending on farming method	Science & technology (TH)	7

GS 1: ART & CULTURE, HISTORY, INDIAN SOCIETY AND GEOGRAPHY

1. Story, history of exposition of sacred relics of St. Francis Xavier

Context: The decennial exposition of the sacred relics of Saint Francis Xavier, the patron saint of Goa, will begin on Thursday (November 21), and go on till January 5 next year. Pilgrims, especially from the Catholic community, and tourists will converge in Goa over the next 45 days to pay homage to the saint, whose mortal remains will be put on public display for veneration. Considered to be a time of spiritual reflection, devotion and celebration, the event will be marked by religious ceremonies including masses, prayer services, novenas, and processions.

Key points

- **Overview:** The mortal remains of the Spanish Jesuit missionary St Francis Xavier, one of the founding members of The Society of Jesus, have been housed at the Basilica of Bom Jesus in Old Goa since 1624. During the exposition, a four-century-old silver glass casket holding the relics will be lowered from its resting place in the mausoleum at the Basilica in a private ceremony.
- **The tradition:** Although the decennial tradition is relatively new, the relics of St Francis Xavier have long been “exposed” to the public. The body of the revered saint has been looked upon as a miracle among the faithful, given that it showed minimal signs of decay. It is believed that the body was “exposed” for veneration of the public on his death anniversary in 1554. After the saint was canonised in 1622, the tradition gained further prominence.
- **Arrangements for the ceremony:** The Church authorities said the casket containing the relics will be carried in a specially designed electric carriage, instead of being carried on shoulders of groups of people, as has been the norm in previous expositions. An 80-member brass band will be a part of the procession ceremony, to showcase the state’s culture and tradition.
- **St. Francis Xavier:** St Francis Xavier, also referred to as “Goencho Saib” (Lord of Goa), arrived in Goa — then a Portuguese colony — in 1542. His primary mission, as ordered by King John III, was to restore Christianity among the Portuguese settlers. He died in 1552 on Shangchuan island off China’s coast. He was first buried on the island. The following year, his body was exhumed and transported to Malacca, where it was housed in the Church of St Paul for several months. The saint’s body was shipped to Goa in 1554 and kept at St Paul’s college in Old Goa — the first building constructed by Jesuits in Goa. The body was later transferred to Casa Professa near the Basilica by 1613 and placed in the Basilica in 1624.

GS 2: POLITY, GOVERNANCE, SOCIAL JUSTICE, INTERNATIONAL RELATIONS/INSTITUTIONS

2. What is Russia’s nuclear doctrine? Updated by Putin

Context: Russian President has signed a revised nuclear doctrine that marks a major shift in Russia's military strategy. The new policy, signed on the 1,000th day of the Ukraine conflict, states that Russia will consider any conventional attack supported by a nuclear power as a joint attack on Russia. This means if Ukraine, supported by the US or NATO allies, attacks Russia using Western-supplied weapons, it could be viewed as an attack by NATO itself. The timing of this policy change is particularly notable as it follows President Biden's decision to allow Ukraine to use US-supplied longer-range missiles against Russian targets.

Russia's Updated Nuclear Doctrine

- The doctrine states that an attack against Russia by a non-nuclear power, with the participation or support of a nuclear power, will be perceived as a joint attack on the Russian Federation.
- It specifies that Russia may resort to nuclear weapons in response to a nuclear strike or a conventional attack that poses a "critical threat" to its sovereignty and territorial integrity, including that of its ally Belarus.
- While the doctrine states conditions for nuclear weapon use, it does not explicitly state that every attack will trigger a nuclear response. This ambiguity allows for a broad interpretation of what constitutes a threat.
- The doctrine asserts that aggression against Russia by a member of a military bloc or coalition is considered aggression by the entire bloc, implicitly referencing NATO.

- The updated doctrine details the scenarios in which nuclear weapons could be employed, particularly in the event of a massive aerial attack involving various military assets.

Key points

- **Nuclear Doctrine:** A nuclear doctrine is a country's official policy that explains when, why, and how it might use its nuclear weapons - it's like a rulebook for nuclear weapons use and deterrence. It provides the conditions under which a country would consider using nuclear weapons, whether for defence, retaliation, or as a warning to other countries who might threaten them. Countries sometimes update their nuclear doctrines to respond to new threats, changing global situations, or to send messages to potential adversaries - just as Russia has recently done.
- **India's Nuclear Program:** *Early Phase (1940s-1960s)* - India's nuclear journey began in late 1940s under Homi J. Bhabha's leadership, with the establishment of Tata Institute of Fundamental Research (1945) and Atomic Energy Commission (1948). Under Nehru's leadership, India initially focused on peaceful nuclear development while advocating for global nuclear disarmament.
Middle Phase (1970s-1990s) - India conducted its first nuclear test "Smiling Buddha" in 1974, but maintained it was for peaceful purposes. This led to the formation of Nuclear Suppliers Group (NSG). India refused to sign both the Nuclear Non-Proliferation Treaty (NPT) in 1968 and the Comprehensive Test Ban Treaty (CTBT), viewing them as discriminatory.
Modern Phase (1998-Present) - The watershed moment came in May 1998 with Operation Shakti (Pokhran-II) tests, openly demonstrating India's nuclear weapons capability.
Nuclear doctrine - India adopted formal Nuclear Doctrine in 2003 with key principles: "No First Use" policy, Credible minimum deterrence, nuclear weapons only for retaliation against nuclear attack, No use against non-nuclear states.
Current Status - India maintains a doctrine of "credible minimum deterrence" while developing civilian nuclear program for energy needs. Focuses on responsible nuclear power status while advocating for global nuclear disarmament.
- **India's No First Use (NFU) Policy:** *Core Principles* - India's NFU policy means it will not be the first to use nuclear weapons in any conflict but will respond with massive retaliation if attacked with nuclear weapons.
Important Features - Only use nuclear weapons in response to a nuclear attack. Retaliation will be massive and designed to inflict unacceptable damage. No nuclear weapon use against non-nuclear weapon states. Maintain a credible minimum deterrence.
History - India formally adopted this policy in January 2003 after the 1998 nuclear tests, demonstrating its commitment to responsible nuclear weapon state behaviour.
- **Conclusion:** Nuclear doctrine represents a significant escalation in Russia's military posture and sends a clear warning to Western nations supporting Ukraine. By explicitly stating that conventional attacks could trigger a nuclear response, Putin is attempting to deter Western military support for Ukraine while asserting Russia's nuclear capabilities. The vague wording of the doctrine, particularly regarding what constitutes a "critical threat," gives Russia considerable flexibility in interpreting and responding to perceived threats. This development adds another layer of complexity to the already tense international situation surrounding the Ukraine conflict.

GS 2: POLITY, GOVERNANCE, SOCIAL JUSTICE, INTERNATIONAL RELATIONS/INSTITUTIONS

3. Should package food content be labelled?

Context: A new report published by Access to Nutrition Initiative (ATNi) a non-profit global foundation, has found that leading food and beverage (F&B) companies, on average, sell products that are less healthy in low-and-middle income countries (LMICs) compared to what they sell in high-income countries (HICs). This report, which is the fifth edition of the 'Global Access to Nutrition Index', states that it assessed 30 of the world's largest F&B manufacturers, 23% of the global F&B market on their performance to improve access to nutritious foods. India is staring at a Non-Communicable Disease (NCD) burden of epic proportions, an estimated 10.13 crore Indians have diabetes, and as per National Family Health Survey 5 data, obesity stands at 24% among women and 23% among men.

Key points

- **Overview:** The report analysed 52,414 products including those from popular brands such as Nestle, Pepsico, Unilever, Coca-Cola and Hershey among others using a health star rating system.
- **Access to Nutrition Initiative (ATNi):** ATNi (Access to Nutrition initiative) is a global foundation actively challenging the food industry, investors and policymakers to shape healthier food systems. We analyse and translate data into actionable insights, driving partnerships and innovations for market transformation so that all people have access to nutritious and sustainable food.
- **ATNi's reports:** The ATNi report found that 'portfolio healthiness' was found to be lowest in LMICs, highlighting disparities in products offered across different markets. Food product healthiness in LMICs scored much lower — 1.8 on the system — than in HICs where it scored 2.3.
- **National Family Health Survey 5:** The NFHS-5 has captured the data during 2019-20 and has been conducted in around 6.1 lakh households. NFHS-5 data will be useful in setting benchmarks and examining the progress the health sector has made over time. NFHS-5 includes some new topics, such as preschool education, disability, access to a toilet facility, death registration, bathing practices during menstruation, and methods and reasons for abortion.
- **Labelling Regulations for Packaged Food: Empowerment** - It will empower the consumers to make informed decisions.
Enhancing Public Health - The proposed changes to food regulations will enhance public health, combatting non-communicable diseases.
Export-based Employment - The portion of processed food in total agricultural exports almost doubled from 2014-15 to 2022-23, reaching around 26%. Adopting global food regulations will create more opportunities for growth and export-based employment.
- **Challenges in food safety regulation in India:** Simply showing nutritional information in big fonts isn't enough if consumers don't understand its importance or the health risks it signals. Harmful substances in popular Indian spice brands and extra sugar in baby food were detected through testing done abroad by a foreign NGO.
- **Way forward:** Raising public awareness about recommended dietary allowances and their connection to saturated fat, sodium, and sugar is essential. Public health departments at both the central and state levels should conduct awareness campaigns to educate the public. There is a need to encourage better food choices that can alleviate strain on healthcare systems. The food regulator must set clear standards and ensure all food companies follow them to keep consumers safe and maintain trust.

GS 2: POLITY, GOVERNANCE, SOCIAL JUSTICE, INTERNATIONAL RELATIONS/INSTITUTIONS

4. Telcos can claim CENVAT credit for towers, shelters

Context: The Supreme Court on Wednesday gave a major fillip to telecom companies by allowing them to claim Central Value Added Tax (CENVAT) credit for the installation of mobile towers and peripherals like prefabricated buildings (PFBs) for which they pay excise duties. A Bench of Justices B.V. Nagarathna and N. Kotiswar Singh held in a judgment that mobile towers and prefabricated buildings (PFBs) or shelters fall within the definition of 'capital goods' or 'inputs' under the CENVAT Rules, 2004 as they provided essential support for the effective transmission of mobile signals and enhance their efficiency.

Key points

- **Overview:** The Supreme Court, in a landmark judgment, has allowed telecom companies to claim Central Value Added Tax (CENVAT) credit for the installation of mobile towers and prefabricated buildings (PFBs).
- **CENVAT:** A tax credit system allowing manufacturers or service providers to claim a set-off on excise duty or service tax paid on inputs or input services used for manufacturing or providing output services.
- **Rules governing CENVAT:** Implemented under the CENVAT Credit Rules, 2004, it replaced the Modified Value Added Tax (MODVAT). These rules define eligible goods, input services, and conditions for availing credit.
- **Criteria for CENVAT credit:**
 - Inputs* - Goods used directly or indirectly in the production of final products.
 - Capital goods* - Machinery or equipment integral to the manufacturing process.
 - Output services* - Taxable services for which input credits can offset the service tax liability.
- **Significance of CENVAT:**
 - Avoids double taxation* - Prevents repeated taxation on the same value addition.
 - Simplifies taxation* - Reduces the tax burden on manufacturers and service providers.
 - Promotes competitiveness* - Encourages businesses to reinvest savings in production and innovation.
 - Consumer benefit* - Reduces the overall cost of goods and services by eliminating cascading taxes.

GS 3: ECONOMY, ECOLOGY, SCIENCE & TECHNOLOGY, DEFENCE, SECURITY AND DISASTER MANAGEMENT

5. GM crops can help fight hunger depending on farming method

Context: The world's population is growing, and more people need more food. But indiscriminately expanding agricultural land and practice is not desirable. Cutting forests to plant more crops will only push already-fragile ecosystems over the edge. Dousing fields with pesticides is similarly toxic and depletes soils and groundwater. Now tools like CRISPR help scientists make targeted changes to a plant's genome. People are also accepting GM when the plant doesn't have foreign genes. But the costs of regulation and ensuring nothing harmful enters the market is still too high for institutions that don't only work for profit.

GM (Genetically Modified) Crops

- **About:** GM crops were first introduced in the USA in 1994 called Flavr Savr tomato, with the objective to slow its ripening process, delaying softening and rotting. Before this, genetic modification was already in use to produce insulin, vaccines, and other drugs on a large scale.
 - Objectives of the GM crops* - Reducing dependence on pesticides/herbicides as the toxins produced by the GM crops (such as Bt-toxins) are used to kill the pests. Providing resistance to certain plant

viruses. Providing tolerance of herbicides used to control weeds. Reducing the need to till the soil to control weeds.

Bt genes - *Bacillus thuringiensis* (Bt) is a bacterium that produces two important proteins - cytolytic (Cyt) and crystal (Cry) toxins, which are toxic to a specific group of insects such as beetles, caterpillars, flies, mosquitoes, etc. The genes expressing these toxins are engineered into plant crops so that they too can produce them. For ex: Bt Cotton.

- **Methods of producing GM Crops:** To genetically modify a crop, a gene of interest (Cry or Cyt genes, or any other gene for a specific trait) is incorporated into the DNA of a plant. It involves mainly two approaches - Recombinant DNA technology using *Agrobacterium tumefaciens*-mediated gene transfer and the Direct approach.
 - *Direct approach* - In the direct approach the gene of interest is cloned into a plant DNA vector and then transferred into the plant using the gene gun method, electroporation method, microinjection, etc.
 - *A.tumefaciens mediated gene transfer* - *A.tumefaciens* is a soil bacterium and is called nature's own genetic engineer. It causes crown gall disease in many plants by transferring tumour-causing DNA into the plant's genome by using a tumour-inducing plasmid (Ti-plasmid).
- **Applications of GM Crops:**
 - Biofortification* - Biofortification is the process of enhancing micronutrient content. Genetic modification has proved to be the best method for biofortification. Ex: β -carotene-enriched 'Golden Rice' was the first application of GM biofortification in 2000.
 - Edible Vaccines* - Edible vaccines can be produced from GM plants. They offer many benefits than the traditional ones due to lower manufacturing costs and much fewer side effects.
 - Biofuels* - Fourth-generation biofuels, which is biofuel obtained from genetically modified (GM) algae and cyanobacteria, have gained considerable attention.
 - Phytoremediation* - Genetic modification can be utilised to clean up soil and water pollutants by expressing the genes that express enzymes dealing with these pollutants.
- **Regulatory Framework in India and GM Crops:** Stringent laws are in place to address threats to animal health, human safety, and biodiversity in general during the development, cultivation, and transboundary movement of GM crops.
 - Recombinant DNA Advisory Committee (RDAC)* - It monitors the development of biotechnology at national and international levels.
 - Review Committee on Genetic Manipulation (RCGM)* - It reviews ongoing projects involving high-risk and controlled field experiments. It also approves the applications for generating research information on GM plants.
 - Genetic Engineering Appraisal Committee (GEAC)* - It is responsible for the overall evaluation of proposals related to the release of GM organisms as well as products into the environment. It works under the Ministry of Environment.
 - State Biotechnology Coordination Committee (SBCC)* - It reviews safety measures in various institutions handling GM organisms and acts as the state-level nodal agency in this regard.
- **Some other Indian GM Crops:**
 - Bt-Brinjal* - The fruit and borer-resistant Bt-brinjal was approved for commercial cultivation by GEAC in 2009, but it was put on a 10-year moratorium due to public outrage and recommendations from brinjal-growing states.
 - GM Mustard* - Commercial cultivation of high-yielding GM mustard in India has not begun yet.